On *Aristolochia thwaitesii* Hooker (Aristolochiaceae)

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ABSTRACT. The Central American plants previously known as *Aristolochia thwaitesii* Hooker are described as new and given the name *Aristolochia stevensii* Barringer. The name *A. thwaitesii* is correctly used for a Chinese species.

Two different species have come to be called *Aristolochia thwaitesii* Hooker. One is native to Central America (Pfeifer, 1966) and one is native to China (Hwang, 1988; Ma, 1989). W. D. K. Thwaites was an energetic collector and director of the Botanical Garden at Perideniya, Ceylon [Sri Lanka]. He collected in Ceylon and Great Britain, so how a Central American and a Chinese species came to be named for him is a puzzle.

William Hooker (1856) illustrated and described *Aristolochia thwaitesii* from a cultivated specimen growing at Kew. The plant was an unusual suffruticose herb with narrowly ovate leaves and basal, branching inflorescences. The flowers had curved calyces and a three-lobed gynostemium. He believed that the original seed was received from Ceylon and named the species in honor of Thwaites. Later, in a note after a plate of the Central American species *A. arborea* Linden, Hooker (1862) noted that *A. thwaitesii* was not from Ceylon and guessed that it might be similar to a species collected by Purdie in Santa Marta, Colombia.

Following up on this reference, Pfeifer searched the New World material for a plant resembling the original description and illustration. In Central America, the shrubby, cauliflorous species with three-lobed gynostemia form a distinctive group that includes *Aristolochia arborea* and *A. panamensis* Standley. Pfeifer (1966) discovered specimens that appeared to match the original description and assigned them to *A. thwaitesii*. He did not realize that the true *A. thwaitesii* had been located elsewhere.

Ten years after his father's note, J. D. Hooker (1871) had published a further note after a plate of *Dorstenia mannii* Hooker f. that went unnoticed by Pfeifer. Hooker wrote that *Aristolochia thwaitesii* was not from either Ceylon or Colombia but from the Old Calabar River region of east Africa, what is now southern Nigeria. He had received a note from Mr. Bullen, a curator at Glasgow, that a specimen matching the description had been sent by Mr. Thompson from that area. This, too, would prove to be mistaken.

Later, Tuchter (1905) collected a plant that matched Hooker's original description and plate. He found it growing under bamboo near Wong Ne Chong and at the base of Black Mountain on Hong Kong. These plants are the true *Aristolochia thwaitesii* and have been described as such by Tuchter (1905), Dunn & Tuchter (1912), Hwang (1988), and Ma (1989). They match the protologue and the lectotype, *Westland s.n.* (K).

The Purdie collection W. J. Hooker saw and confused with *Aristolochia thwaitesii* is probably *A. maxima* Jacquin. That species is a woody liana with 6-lobed gynostemium that often has narrowly ovate to lanceolate leaves and branched, basal inflorescences. It is common around Santa Marta (González, 1990), and a Purdie collection exists that has very long inflorescences. The African plant grown at Glasgow from Old Calabar is probably *A.* (*Pararistolochia*) *juju* S. Moore, a liana with a triangulate calyx limb and cauliflorous, racemose inflorescences. A collection by Mann from Old Calabar exists. The Central American species, called *A. thwaitesii* by Pfeifer (1966), is a distinct species now in need of a name.

Aristolochia stevensii Barringer, sp. nov. TYPE: Nicaragua. Matagalpa: along Hwy. 3, 6.6 km N of Matagalpa (El Tuma intersection), ca. km 137.5, 12°59′N, 85°55′W, 1,200–1,250 m, 24 May 1981, *Stevens & Henrich 20353* (holotype, BKL; isotypes, F, MO). Figure 1.

Species *A. rhizanthae* Lundell affinis sed liana foliis ovatis cordatis seu auriculatis subtis tomentosis utriculis truncatis differt; ab *A. thwaitesii* Hooker limbo calycis manifeste tridentato gynostemii columna differt.

Liana. Stems woody, to 2 cm diam., the young stems tomentose, the older stems with slightly winged, corky bark. Pseudostipules absent. Leaves alternate; petioles 10–15 mm long, 2–3 mm diam., tomentose; blades ovate, 9–17 cm long, 4–9 cm wide, subcoriaceous, glabrous above, tomentose below, the base cordate-auriculate, the lobes 10–12 cm long, often

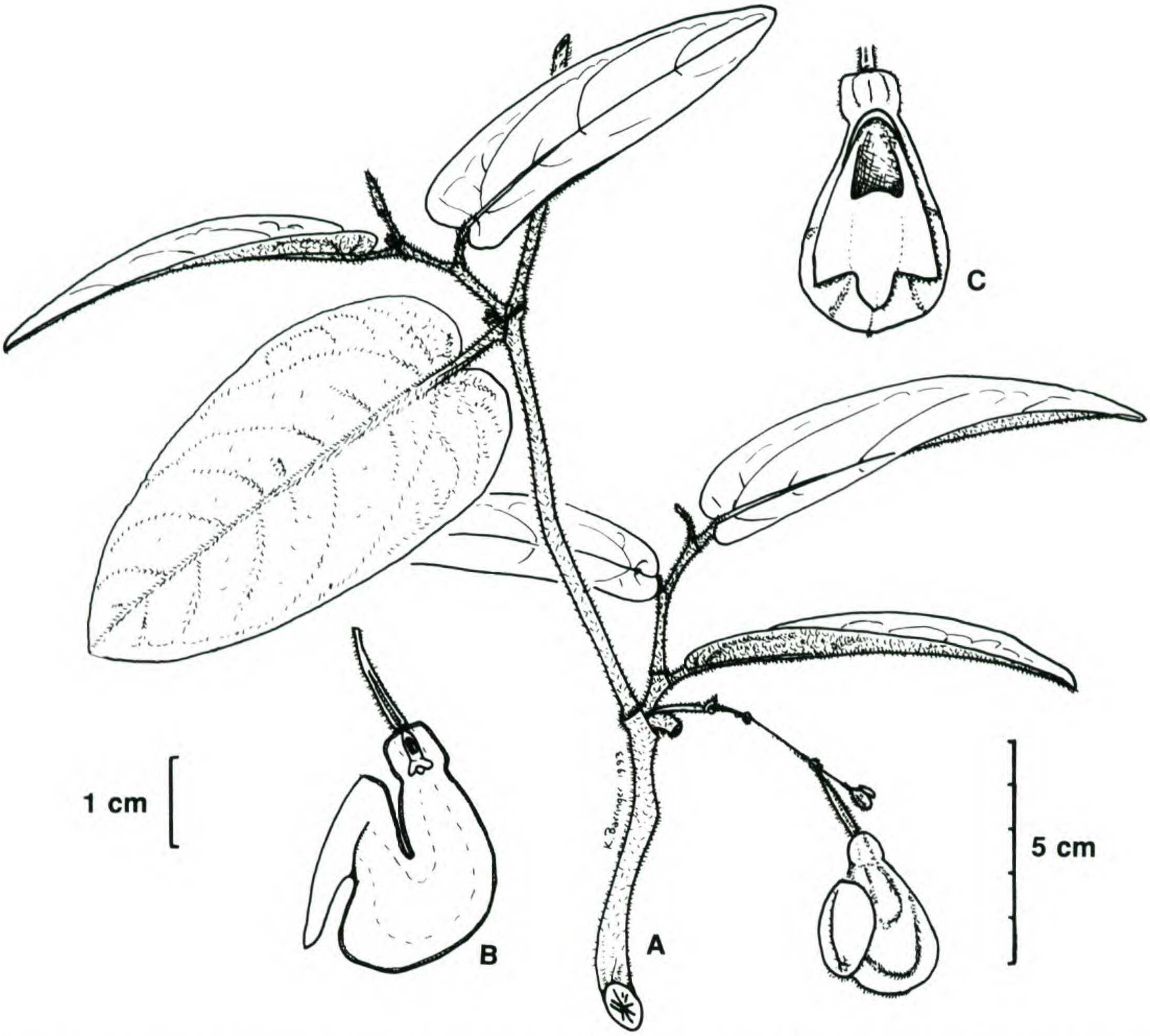

Figure 1. *Aristolochia stevensii* Barringer. —A. Habit with bud and leaf turned to show tomentose underside (*Peña 122*, MO). —B. Longitudinal section of flower (*Stevens & Henrich 20353*, BKL). —C. Front view of flower (*Stevens & Henrich 20353*, BKL).

overlapping, the apex obtuse to rounded, often minutely apiculate. Inflorescences racemose, axillary, bracteate, usually borne on older stems, but also borne on younger growth; calyx to 4 cm long, bent, dull yellow to yellow-brown, the utricle inflated, 7–10 mm long, 5–7 mm wide, truncate at base, usually with a slight constriction where it joins the tube, but the tube and utricle can be difficult to distinguish, the tube strongly bent, greatly inflated along the lower side, 2–2.5 cm wide, the limb unequally 3-lobed, brown, glossy within, the lateral lobes triangulate, 5 mm long, 17–20 mm wide at base, the midlobe lowermost, ovate, 5–7 mm long, the throat dark purple above, white to pale yellow below; gynostemium 3-lobed, columnar, 5–10 mm tall, stalked, the anther 6, in three groups. Capsules not seen.

This species is named for Warren Douglas Stevens, whose collections have added greatly to our understanding of the flora of Nicaragua. It grows in wet forest around 1,000 m in the mountains of southwestern Honduras and northwestern Nicaragua. It is usually found in secondary growth at the edge of forests.

Paratypes. HONDURAS. **Francisco Morazán:** Cerro Triquilapa (La Montañita), 15 km carretera a Danalí, Tegucigalpa, 25 Julio 1975, *C. Nelson 2781* (MO, UNAH); Cerro Triquilapa, 1,780 m, 14 km E de Tegucigalpa, 25 July 1975, *M. E. Peña 122* (MO); Tegucigalpa, *Standley 9734* (F). NICARAGUA. **Jinotega:** *Molina R. 10691* (F). **Matagalpa:** km 135 carretera a Jinotega, Molino Norte, 12°58′N, 85°55′W, 1,000–1,100 m, 25 June 1981, *P. Moreno 9498* (BKL, MO).

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Literature Cited

Dunn, S. T. & W. J. Tuchter. 1912. Flora of Kwangtun and Hongkong. Bull. Misc. Inform. 10: 1–370.

González, F. A. 1990. Aristolochiaceae. Flora de Colombia 12: 1–184.

Hooker, J. D. 1871. [Note following] *Dorstenia mannii.* Bot. Mag. 97: 5908.

Hooker, W. J. 1856. *Aristolochia thwaitesii.* Mr. Thwaites's Aristolochia. Bot. Mag. 82: t. 4918.

———. 1862. [Note following] *Aristolochia arborea.* Tree Aristolochia. Bot. Mag. 88: t. 5295.

Hwang S. M. 1988. Aristolochiaceae. Fl. Rep. Pop. Sinica 24: 159–245.

Ma J. S. 1989. A revision of *Aristolochia* Linn. from E. & S. Asia. Acta Phytotax. Sin. 27: 321–364.

Pfeifer, H. W. 1966. A revision of the North and Central American hexandrous species of *Aristolochia* (Aristolochiaceae). Ann. Missouri Bot. Gard. 53: 1–114.

Tuchter, W. J. 1905. Description of some new species and notes on other Chinese plants. J. Linn. Soc., Bot. 37: 58–70.